Training

Through Cisco authorized Training Partners, Cisco Systems offers up-to-date training on all products and on internetworking technology. Classes include lectures and hands-on labs using the latest Cisco hardware and software. With Cisco training, students can acquire the skills they need to meet the everyday challenges of internetworking.

Cisco Systems now offers twelve training courses through our Training Partner program. This chapter describes each course and also provides information about training materials and training partners, as follows:

- Introduction to Cisco Router Configuration
- Advanced Cisco Router Configuration
- Installing and Maintaining Cisco Routers
- Configuring Cisco's Access Services
- Cisco SNA Configuration for SNA Administrators (SNAS)
- Cisco SNA Configuration for Multiprotocol Administrators (SNAM)
- Introduction to CiscoWorks Configuration
- Cisco Internetwork Design
- Cisco Internetwork Troubleshooting
- Cisco IOS Update
- Cisco ATM Solutions
- Cisco LightStream 2020 Operations and Configuration
- Cisco Connection Training CD-ROM
- Additional Training Materials
- Training Partners

In addition to the regularly scheduled curriculum at Cisco Systems, onsite training is available through the Training Partners. Onsite training courses are tailored to meet your specific networking needs. Providing equipment and facilities is the responsibility of the customer.

For further information about Cisco Systems training, contact the Training Partner nearest you. For a list of addresses, refer to the section “Training Partners” at the end of this chapter.

Introduction to Cisco Router Configuration

Course length: Five days

Course code: TRN-ICRC

This course presents students with the basic concepts and commands required to configure Cisco routers in multiprotocol internetworks. Through lectures, discussions, exercises, and lab projects, students gain hands-on experience configuring fully operational Cisco routers. Students apply Cisco Internetwork Operating System (Cisco IOS) software commands to start up and configure a newly installed router. Students perform basic configuration procedures to build a multirouter, multigroup internetwork that uses LAN and WAN interfaces for several routing and routed protocols.

Who should attend:

> Network administrators and technicians who configure and support multiprotocol internetworks, and engineers who are getting started with basic Cisco IOS software.

Prerequisites:

> Some knowledge of basic networking vocabulary and concepts. Basic knowledge of binary and hexadecimal numbering is a plus, but not required.

Course Outline

- Introduction to Internetworking
  - Evolution of internetworking
  - Applications and upper layers
  - Physical and data-link layers
  - Network layer and path determination
- Getting Started
  - User interface
  - Router basics
  - Initial configuration
  - Router configuration
  - Cisco Internetwork Operating System (Cisco IOS) software
- Standard Protocol Suites
  - TCP/IP
  - Novell IPX

  - Banyan VINES
  - AppleTalk
  - DECnet
- WAN Connectivity and Bridging
  - Introduction to serial connections
  - ISDN
  - X.25
  - Frame Relay
  - Auto installing configurations
  - Transparent bridging
  - Source-route bridging

Note There may be more material in this course than can be covered in the time allotted. Instructors might select material appropriate to their audiences. For example, coverage of standard protocol suites, WAN connectivity, and bridging may vary based on the assessment of students' job needs.

Advanced Cisco Router Configuration

Course length: Four days

Course code: TRN-ACRC

This course familiarizes students with the more complex concepts and commands available for configuring Cisco routers. Through lectures, exercises, and lab projects, students gain hands-on experience configuring fully operational Cisco routers in a multiprotocol environment. They learn advanced configuration skills necessary to deal with issues inherent in complex multiprotocol networks.

Who should attend:

Network administrators, network specialists, and technicians who configure and support multiprotocol internetworks.

Prerequisites:

Introduction to Cisco Router Configuration (TRN-ICRC) or successful completion of the ICRC competency test offered by Drake, coupled with 3–6 months of hands-on experience configuring Cisco routers. Familiarity using the different configuration modes available on Cisco routers is required. A working knowledge of routed and bridged networks is strongly recommended.

Course Outline

- Complex Internetworking
  - Introduction to complex internetworking
  - Managing complex internetworks
- Managing Traffic and Security
  - Introduction to managing traffic and security
  - IP traffic
  - IPX traffic
  - AppleTalk traffic
  - Queuing
- Scalable Routing Protocols
  - Introduction to scalable routing protocols
  - OSPF
  - Enhanced IGRP
  - BGP
  - NLSP
- Scalability Features for WANs
  - Introduction to scalability features for WANs
  - Serial line options
  - Bandwidth on demand
  - Connecting to switched services
- Nonrouted Network Integration
  - Introduction to nonrouted network integration
  - Bridging

Installing and Maintaining Cisco Routers

Course length: Three days

Course code: TRN-IMCR

This course prepares students to install, maintain, and troubleshoot Cisco routers by providing hands-on experience diagnosing and replacing router components. The course consists of lecture, exercises, and labs. (Verify that your prospective training source provides labs to fit your training needs.)

Who should attend:

Technicians, support analysts, and maintenance managers who have extensive hands-on internetworking experience and are responsible for designing, maintenance sparing, network analysis, troubleshooting, and repairing of Cisco router products.

Prerequisites:

Hands-on experience installing, configuring, and troubleshooting internetworking system components. Knowledge of basic networking concepts, terminology, standards, and network components. Attended *Introduction to Cisco Router Configuration* course or equivalent experience.

Course Outline

- Router Hardware Essentials
  - Introducing Cisco Hardware Products
  - Understanding Router Startup and Using Software Commands
  - Using Virtual Configuration Registers
  - Configuring and Using Flash Memory
- Installing and Maintaining Core Routers
  - Cisco 7000 Series
  - Cisco 7000 Series Control Processors
  - Cisco 7505
  - Cisco 7507
  - Cisco 7513
  - WAN Interface Processors
  - LAN Interface Processors
  - Versatile Interface Processor
  - Understanding System Messages and Using Commands
  - Troubleshooting Cisco 7000 Family Routers
  - Installing and Upgrading the Cisco 7000 Family
- Installing and Maintaining Modular Access Routers
  - Cisco 4000 Series
  - Cisco 4000 Series: WAN Network Processor Modules
  - Cisco 4000 Series: LAN Network Processor Modules
  - Cisco 4000 Series: Troubleshooting
  - Cisco 4000 Series: Installing and Upgrading

Configuring Cisco's Access Services

Course length: Two days

Course code: TRN-CCAS

This course provides fundamental and practical knowledge on Cisco access services. Through lectures and lab exercises, students will learn how to install, configure, use, monitor, and troubleshoot basic Cisco access services.

Who should attend:

Network administrators and technicians.

Prerequisites:

Students are expected to have a working knowledge of TCP/IP, Novell IPX, and AppleTalk prior to enrolling in this class. Students are also expected to have read the Cisco *Access Server Self-Study Guide* or possess equivalent experience.

Course Outline

- Access Basics
  - Access services overview
  - Access hardware platforms (Cisco 2509 through Cisco 2512, AS5100 Access Server)
  - Access server system basics (memory components, operating modes, system error logging, line types, line commands)
  - Modem and asynchronous wiring basics (EIA/TIA-232 specification, modem modulation standards, modem error control and data compression, modem configuration, chat script)
- Access Services
  - Remote-node services (SLIP, PPP, ARAP, XRemote, asynchronous callback)
  - Using NTS Remote Client (installation, configuration, and operation)
  - Terminal services (X.25 PAD, Telnet, LAT, TN3270, menuing system)
  - Protocol translation services (one- and two-step protocol translation, asynchronous mobility)
  - Asynchronous routing services (dial backup, dial-on-demand routing, dialer rotary group)
- Access Management
  - Access control procedures (login, TACACS, XTACACS, PAP, CHAP, ARAP, SLIP, EXEC)
  - Access control using TACACS+ (AAA/TACACS+ model, authentication, authorization, accounting, TACACS+ server)

- CiscoWorks for Windows (HP OpenView for Windows, Show Commands, Health Monitor, CiscoView, Configuration Builder)
- Total Control Manager (installation, configuration, and operation)

Cisco SNA Configuration for SNA Administrators (SNAS)

Course length: Five days

Course code: TRN-SNAS

This introduction to Cisco and IP networking is designed for networking professionals who are already familiar with SNA and want to learn how to configure Cisco routers in an SNA environment. The course familiarizes students with the concepts and commands required to configure Cisco routers and includes several exercises to reinforce the concepts of the lectures.

Who should attend:

People who have some SNA background and are responsible for implementing and maintaining SNA networks using Cisco routers.

Prerequisites:

Introduction to Cisco Router Configuration (TRN-ICRC) or successful completion of the ICRC competency test offered by Drake Prometric. Familiarity with SNA terminology and products is required.

Course Outline

- Standard Protocol Suites 1
  - TCP/IP overview
  - IP address configuration
  - IP routing configuration
  - Configuring IPX
- Bridging
  - Bridging overview
  - Transparent bridging
  - Source-route bridging
- Advanced Bridging
  - Mixed media bridging
  - Remote source-route bridging
  - Data link switching plus (DLSw+)

- NetBIOS
- LAN Network Manager

- Cisco SNA Support
  - SNA refresher
  - SDLC transport
  - SNA prioritization
  - SNA translation
  - Channel Interface Processor (CIP)
  - SNA Frame Relay access support
  - Downstream physical unit (DSPU)
  - Advanced peer-to-peer networking (APPN) overview

Cisco SNA Configuration for Multiprotocol Administrators (SNAM)

Course length: Five days

Course code: TRN-SNAM

This introduction to SNA networking is designed for networking professionals who are already familiar with TCP/IP and want to learn how to configure Cisco routers in an SNA environment. The course familiarizes students with the concepts and commands required to configure Cisco routers and includes several exercises to reinforce the concepts of the lectures.

Who should attend:

People who have no SNA background and are responsible for implementing and maintaining SNA networks using Cisco routers.

Prerequisites:

Introduction to Cisco Router Configuration (TRN-ICRC) or successful completion of the ICRC competency test offered by Drake Prometric. Familiarity with IP addressing, subnet masking, and routing protocols such as IGRP, RIP, or OSPF is required.

Course Outline

- SNA Fundamentals
  - Concepts and Terminology
  - Data link protocols
  - SNA upper layer protocols

  - IBM network management
  - IP refresher
- Bridging
  - Bridging overview
  - Transparent bridging
  - Source-route bridging
- Advanced Bridging
  - Mixed media bridging
  - Remote source-route bridging
  - Data link switching plus (DLSw+)
  - NetBIOS
  - LAN Network Manager
- Cisco SNA Support
  - SDLC transport
  - SNA prioritization
  - SNA translation
  - Channel Interface Processor (CIP)
  - SNA Frame Relay access support
  - Downstream physical unit (DSPU)
  - Advanced peer-to-peer networking (APPN) overview

Introduction to CiscoWorks Configuration

Course length: Five days

Course code: TRN-ICWC

This is a lecture and hands-on course for first time CiscoWorks users. The course consists of two modules:

- CiscoWorks Environment
- Introduction to CiscoWorks

The first module describes UNIX operating system basics including the commands and setup procedures necessary to install and run CiscoWorks 3.0. It also helps the student understand the system requirements and commands required to install CiscoWorks 3.0 software for SNM and HP OpenView.

The second module introduces students to CiscoWorks and the CiscoWorks network management applications including CiscoView, CiscoConnect, and the TACACS server setup. Students participate in a variety of hands-on exercises that use CiscoWorks 3.0 software for SNM.

At the conclusion of the course, students will be able to install and configure CiscoWorks, build maps depicting Cisco routers in their networks, and use the CiscoWorks applications to perform common network and router management tasks.

Who should attend:

Managers, users, and analysts responsible for installing, configuring, and operating CiscoWorks on internetworks.

Prerequisites:

A basic understanding of UNIX and SunNet Manager, or other supported network management platform, is strongly recommended.

Course Outline

- Introduction to UNIX
  - Logging in and out
  - Understanding UNIX processes
  - Understanding UNIX directories
  - Working with UNIX files
  - Editing files with vi
  - Customizing the UNIX environment
- Installing CiscoWorks
  - Preinstallation preparation
  - Installation and basic configuration
- Network Management Overview
  - The Cisco router agent
  - SNMP overview
  - Supported standard SNMP objects
  - Cisco objects
- The Network Management Platform
  - What is a management platform?
  - SunNetManager
  - Hewlett Packard OpenView
  - IBM NetView 6000

- Getting Started with CiscoWorks
  - Hardware and software requirements
  - Configuring Cisco routers for CiscoWorks management
  - Activating CiscoWorks from within the management platform
- CiscoView
  - Overview of CiscoView
  - Cisco hardware supported
  - Starting CiscoView
  - Using CiscoView
- Fault Management
  - Fault management overview
  - CiscoWorks fault management applications
- Performance Management
  - Performance management overview
  - Polling devices
  - Reporting on polled data
- Configuration Management
  - Configuration management overview
  - Managing router configurations
  - Managing router software images
  - Downloading software images
  - Downloading Cisco 2500 series software images via CiscoWorks' RXBOOT
  - Using AutoInstall
  - Snap-In configurations
  - Scheduling global commands
- CiscoWorks Security
  - Security management overview
  - Securing CiscoWorks applications
  - Router domains
  - TACACS manager
- Database Administration
  - The Sybase database model
  - Starting and stopping the database
  - Enlarging the database
  - Backing up and restoring the database

- CiscoConnect
  - CiscoConnect Overview
  - CiscoConnect requirements
  - Setting up CiscoConnect
  - Using CiscoConnect

Cisco Internetwork Design

Course length: Five days

Course code: TRN-CID

The CID course presents design methodology, models, and rules. It encompasses a broad range of technologies that are presented at a fast-paced and advanced level. Case studies allow students to apply theoretical material to realistic situations.

Who should attend:

Internetwork designers and systems engineers with years of experience implementing networks, who have advanced to high-level positions that involve designing architectures for complex, multiprotocol internetworks.

Prerequisites:

Broad theoretical and hands-on experience with multiprotocol internetworks. An understanding of typical routing algorithms, including vector distance, link state, split horizon, and convergence. A detailed understanding of the IP protocol, including addressing, subnetting, and routing protocols such as RIP, IGRP, and OSPF. A recognition of routing and bridging issues in the AppleTalk, IPX, and NetBIOS environments. Experience working with SNA internetworking. Knowledge of WAN protocols including Frame Relay, ISDN, and X.25. An understanding of typical bridging algorithms, including source-route bridging, transparent bridging, and the spanning-tree algorithm. Comprehension of protocol behavior, such as broadcasting, multicasting, keep-alives, flow control, resource discovery, connectionless versus connection-oriented services, connection establishment, and media access methods.

Course Outline

- Internetwork Design Fundamentals
  - Design goals
  - Design steps
  - Hierarchical internetwork model
- Campus LAN Design
  - Selecting devices for the campus LAN
  - Designing switched campus LANs

  - Virtual LANs
  - ATM solutions
  - ATM LAN emulation
  - CiscoFusion architecture
- IP Network Design
  - IP addressing choices
  - VLSM
  - Multicast addressing
  - IP routing
  - Routing convergence
  - Classless routing and route summarization
  - Route redistribution
  - OSPF
  - IGRP
  - Enhanced IGRP
- Desktop Protocols
  - AppleTalk addressing and zones
  - AppleTalk administrative choices
  - AppleTalk routing
  - IPX design and administrative choices
  - IPX routing
  - IPX RIP and SAP issues
  - IPX NetBIOS
  - NetBIOS (NetBEUI) design
  - NetBIOS and source-route bridging
- WAN Design
  - Backbone protocol choices
  - Optimizing WAN availability and performance
  - Frame Relay design
  - Frame Relay support for upper-layer protocols
  - Frame Relay routing
  - Frame Relay subinterfaces model
  - Frame Relay switching
  - X.25 design
  - ISDN design

  - Point-to-Point WAN design
  - Asynchronous WAN design
  - Dial-on-demand routing
- SNA Design
  - SNA technology
  - Reliable SNA internetworks
  - Scalable design models
  - Token Ring gateways
  - Serial tunneling for SDLC
  - SDLLC conversion
  - RSRB
  - DLSw+
  - APPN
  - Cisco Channel Interface Processor
  - Encapsulation choices
  - Prioritization
  - LLC2 performance enhancements
- Security Issues
  - Firewalls and gateways
- Internetwork Design Case Studies
  - Students work in teams to design realistic internetworks and present them to the class.

Cisco Internetwork Troubleshooting

Course length: Four days

Course code: TRN-CIT

This course teaches students how to troubleshoot internetworks that include Cisco equipment. Students learn to use a standard problem-solving model, common network troubleshooting tools, and the diagnostic tools provided with the Cisco software to analyze and resolve network problems in IP, WAN, Novell, and AppleTalk environments.

Who should attend:

Network systems analysts and maintenance personnel responsible for troubleshooting network problems.

Prerequisites:

Cisco SNA Configuration for SNA Administrators (TRN-SNAS) or *Advanced Cisco Router Configuration* (TRN-ACRC) or completion the Router Software Configuration Test offered by the Drake Authorized Testing Centers (phone 800 204-3926 or 612 921-6087). Students should also have at least six months of working experience with a Cisco-based router internetwork after completing any of the above. Experience and knowledge of internetworking in a Cisco router environment will greatly enhance the students' ability to perform the lab exercises in this predominantly hands-on methodology course.

Course Outline

- Troubleshooting Methodology
  - Symptoms, causes, and actions
  - Generic problem-solving model
- Protocol Characteristics Review
  - Connection-oriented versus connectionless
  - Ethernet, IEEE 802.3, Token Ring
  - FDDI
  - Serial protocols
  - TCP/IP
  - Novell IPX
  - AppleTalk
- Troubleshooting Tools
  - Using router diagnostic tools
  - Using CiscoWorks
  - Using third-party tools
- Cisco Diagnostic Tools
  - Interface-specific commands
  - Memory and process commands
  - Buffer and message logging commands
  - Debugging messages
  - Fault-tracking commands
  - Interconnectivity commands

- Hands-on Troubleshooting
  - Troubleshooting TCP/IP
  - Troubleshooting WAN
  - Troubleshooting Novell IPX
  - Troubleshooting AppleTalk
  - Using Cisco support functions

Cisco IOS Update

Course length: Two days

Course code: TRN-IOSU

This course updates students who are already familiar with Cisco internetworking products about the new hardware and software features supported in a new major release of the Cisco Internetwork Operating System (Cisco IOS). The new Cisco IOS features are addressed through lecture and exercises.

Who should attend:

Network administrators, internetworking specialists, and technicians who have experience configuring and maintaining Cisco products in a multiprotocol environment.

Prerequisites:

Because this course only covers additive features, students should already have a working knowledge of Cisco software products in a multiprotocol environment. Before attending this course, we recommend that students take any one of the following courses: *Introduction to Cisco Router Configuration* (TRN-ICRC), *Advanced Cisco Router Configuration* (TRN-ACRC), *Cisco SNA Configuration for SNA Administrators* (TRN-SNAS), or *Cisco SNA Configuration for Multiprotocol Administrators* (TRN-SNAM).

Course Outline for Cisco IOS Release 11.1

- NLSP Route Aggregation
- NHRP for IPX
- RIP Version 2
- VLAN Switching and Routing
- NetBEUI over PPP
- Modem Auto-configuring
- RADIUS
- Lock and Key Security

- Versatile Interface Processor (VIP)
- Multilink PPP
- PPP Callback
- IP Address Pooling
- FRAS BAN Support
- Documented Features

Course Outline for Cisco IOS Release 11.0

- AppleTalk Multicast—SMRP
- SPX Spoofing
- Weighted Fair Queuing
- Concurrent Routing and Bridging
- LAN Emulation
- RFC 1577 Classical IP and ARP over ATM
- Policy Routing
- Access Control Using TACACS+
- RSP2
- Flash Credit Card Memory
- APPN Overview
- DLSw+ Enhancements
- Channel Interface Processor (CIP)
- Documented Features

Course Outline for Cisco IOS Release 10.3

- Introduction
- Multiple Group Hot Standby Routing
- Transparently Bridged Virtual LANs
- AutoInstall Overview and AutoInstall Over Frame Relay
- IPXWAN and NLSP
- Cisco Discovery Protocol
- AppleTalk Interenterprise Routing
- ISDN and PPP Enhancements
- Downstream Physical Unit (DSPU)

- SNA Frame Relay Access Support
- Flash Memory

Note Course outlines vary based on contents of the Cisco IOS release.

Cisco ATM Solutions

Course length: Three or four days

Course code: TRN-ATM

This course presents selected components of Cisco Systems' implementation of ATM technology. It begins by providing an overview of ATM technology, and then focuses on operation and configuration of the native ATM interface processor (AIP) for the Cisco 7000 router family and the Cisco LightStream 1010 ATM switch. The extended course introduces the LightStream 2020 enterprise ATM switch. It includes hands-on lab exercises in which students configure the AIP on the Cisco 7000 router, the LightStream 1010, and use the StreamView configurator to establish entries in the LightStream 2020 management database.

Who should attend:

Networking professionals who are responsible for planning, configuring, or supporting ATM-based networks that use Cisco ATM technology.

Prerequisites:

Prior exposure to data networking concepts and terminology is required.

Course Outline

- ATM Technology
  - ATM fundamentals
  - ATM physical layer: SONET/SDH and others
  - ATM layer
  - ATM adaptation layers: AAL1, AAL3/4, AAL5
  - Traffic characteristics
  - ATM addressing and signaling
  - ATM routing: IISP and PNNI
  - WAN internetworking
  - RFC 1483: Classical IP-over-ATM
  - RFC 1577: Classical IP-over-ATM
  - Next Hop Resolution Protocol (NHRP)

- LAN emulation
- ATM network management

- Cisco ATM Interface Processor (AIP)
  - Features and functions
  - AIP physical layer interface module (PLIM) types
  - AAL types supported
  - ATM DXI
  - Traffic shaping capabilities
  - Rate queue
  - ATM signaling support
  - PVC and SVC support
  - AIP ATM internetworking
  - AIP configuration commands
  - MAP-class commands
  - AIP debugging commands
- Cisco LightStream 1010 ATM Switch
  - Features and functions
  - Switch applications
  - ATM switch processor (ASP) module
  - Feature card
  - Carrier module (CAM) and port adapter modules (PAMs)
  - Switch internal architecture
  - Physical interfaces support
  - Traffic management and congestion control
  - Network management capability: OAM, ILMI, MIBs, ATM director
  - ATM signaling support
  - PVC and SVC support
  - PNNI and IISP standards support
  - LAN emulation and client and RFC1577 client
  - Switch configuration commands
- Introduction to LightStream 2020
  - Switch applications
  - Key components and associated functions
  - Connection types and services
  - System management capabilities

- ATM Lab
  - AIP configuration
  - Cisco LightStream 1010 configuration
  - Cisco LightStream 2020 StreamView Database Configuration

Cisco LightStream 2020 Operations and Configuration

Course Length: Five days

Course Code: TRN-LSTR

This course provides an introduction to ATM technology and describes the tasks customers must perform to install and configure LightStream 2020 ATM switches. It also contains instructions on how to perform chassis, line and access card, and port configurations. Further, this course offers instructions on how to diagnose hardware problems, correct failures, isolate port problems, use the Test and Control System (TCS) commands, and perform software recovery procedures. Finally, this course introduces students to the LightStream 2020 command-line interface (CLI) and graphical user interface software tools (StreamView).

Who should attend:

This course is designed for customers experienced with data communications equipment who are responsible for installing and maintaining corporate networking equipment.

Prerequisites:

Experience with telecommunications and networking equipment and concepts. Familiarity with UNIX system and network management concepts and procedures.

Course Outline

- Concepts and Components
  - Introduction to LightStream 2020
  - ATM technology overview
  - LightStream 2020 hardware component description
  - Traffic management
  - Connections and services
  - Network management overview
- Setup and Maintenance
  - TCS hub commands

  - Initial startup and system configuration
  - Software recovery
  - NP O/S file structures (UNIX overview)
  - Detecting and correcting failures
  - LightStream 2020 traps
  - Command-line interface lab
  - Isolating port problems and software recovery
  - Monitoring a LightStream switch
- LightStream 2020 configuration
  - StreamView configuration basics
  - Configuring nodes, cards, and ports using StreamView
  - Configuring bridges using StreamView
  - Configuring PVCs and VLIs using StreamView
  - CiscoView configuration
  - GUI configuration procedures lab
  - CLI configuration
  - CLI configuration lab
  - Statistics and data collections
  - Hardware diagnostics
  - Hardware diagnostics lab
  - Wrap up and course critique

Cisco Connection Training CD-ROM

Course Length: Self-paced

Estimated time to complete: 30 minutes per chapter, total of 47 chapters

Product Number: DOC-CCTCD

Ordering: To order the Cisco Connection training CD, contact your customer service representative and use the product number above.

This new CD-ROM contains the internetworking technologies that provide self-paced training focusing on technology and protocol fundamentals. It is presented as a series of individual lessons, set within the context of chapters and higher-level groupings referred to as “modules.”

The internetworking technologies multimedia CD-ROM has two primary goals:

- To provide a conceptual framework for other Cisco educational tools
- To introduce concepts that you can use to understand internetworking environments and to help you make informed product decisions

Who should order: Anyone interested in basic internetworking technologies fundamentals

Prerequisites: None

Course Outline

- About Internetworking Technologies
- Using Internetworking Technologies
- Internetworking Basics
- LAN Protocols
- WAN Technologies
- Bridging and Switching
- Routed Protocols
- Routing Protocols
- Network Management

Additional Training Materials

For individual study, Cisco offers additional training CD-ROMs and a variety of self-study guides. For product numbers and descriptions of this material, see the section “Training Documentation” in the “Documentation” chapter. The “Documentation” chapter also contains ordering instructions in the section “Ordering Documentation.”

Training Partners

The *Cisco Systems Training Partners Program* ensures that you receive the highest quality training possible. Training Partners have internetworking expertise thereby adding value to the delivery of classes. The Cisco Systems Training Partners Program provides classes in over 90 cities, allowing worldwide customers access to high-quality training. All Cisco classes are presented by certified Cisco Systems instructors using original materials created and distributed by Cisco Systems.

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